

# Weekly Project Report (COMP-10199)

<b>Project Title</b>	Project 14: Voice Agent for Candidate Onboarding & Career Guidance	
<b>Report Date</b>	2026/02/13	
Team Members (Full name)		
1 – Dhairy Patel	2 – Brendan Dileo	
3 – Jay Choksi	4 – Rishyu Babariya	
What was accomplished this week? (Please include details and avoid general terms)		
<ul style="list-style-type: none"> <li>Met internally as a group on <b>Wednesday, February 11 2026</b> to discuss the state of the project, expectations for the current week and following break week, discussed the Python version inconsistency issue across different environments and the corresponding fix, and discussed inconsistencies between the Project Proposal and current project scope (Correction Loop, Session Context confirmed out of scope by project owner).</li> <li>Fixed Python and dependency version inconsistencies across different team member machines by creating a <code>pyproject.toml</code> configuration file defining the project name, version, required Python version, and dependency versions.</li> <li>Finished creating the initial streamlit dashboard implementation and pushed the code to the repository.</li> <li>Resolved an issue where a team member had accidentally pushed work to a forked version of the repository rather than the main repo. After identifying the issue, the code was migrated, a PR was created, reviewed, and merged to main.</li> <li>Added and improved documentation in the Local Voice Agent implementation and improved logging across the onboarding session.</li> <li>Added a second onboarding field (employment status) to the voice agent and extracted onboarding configuration into a dedicated file containing the fields and system prompt, refactoring the conversation flow to be config-driven rather than hardcoded.</li> <li>Refactored the main python file to use a turn-based loop based on the number of declared onboarding fields, removing hardcoded logic.</li> <li>Started considering how we could implement a REST API to work alongside the agent as per the project owners feedback.</li> </ul>		
What was not completed as planned? Please explain why and state your plan to fix it.		
<ul style="list-style-type: none"> <li><b>Session Context Retention</b> was not completed this week. <ul style="list-style-type: none"> <li><b>Reason:</b> The project owner confirmed that session context retention is currently out of scope, following our meeting with the project owner on Friday, January 30th.</li> <li><b>Plan to Fix:</b> Rather than implementing a full session persistence system, we will continue our current approach of retaining context within a single session via conversation history. This</li> </ul> </li> </ul>		

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ensures the core logic is in place and functional, and can be extended to support cross-session retention in the future if time permits.

- The **Agent's Correctional Loop Strategy** was not completed this week.
  - **Reason:** The project owner specified that a correctional loop within the voice agent is not required for the prototype and should be considered out of scope for now. This was discussed and agreed upon during our meeting on January 30th.
  - **Plan to Fix:** The voice interaction flow diagram has already been updated to reflect the removal of the correctional loop. In place of a formal correction strategy, basic confirmation and clarification behaviour will be handled through the agent's system prompt configuration, allowing the LLM to naturally acknowledge and verify user responses without a dedicated correction mechanism.

## Team Member 1 Activities (Please include details and avoid general terms)

- Performed detailed PR reviews for backend and pipeline-related changes before merging into the main branch, validating logic consistency, session handling behavior, and overall code quality. Reviewed Brendan's backend refactoring and initiated review of Rishyu's dashboard configuration updates, with extended dashboard testing scheduled for the following week.
- Undertook deep functional testing of the Local Voice Agent via CLI-based interaction, validating onboarding flow sequencing, turn-based logic, system prompt behavior.
- Designed and executed structured test scenarios to verify newly added onboarding fields, ensuring correct data extraction, flow progression, and response handling across varied simulated user inputs.
- Identified areas for improvement in logging clarity and runtime traceability during onboarding sessions, providing feedback to strengthen debugging visibility.
- Cross-validated backend onboarding logic against dashboard requirements to ensure consistent data flow and field handling across components.

## Team Member 2 Activities (Please include details and avoid general terms)

- Resolved environment inconsistencies across team machines by introducing a `pyproject.toml` file to standardise the Python and dependency version used across the project.
- Improved code quality in the local voice agent by adding comprehensive docstrings to all methods and enhancing session logging to better track the onboarding flow at runtime.
- Extended the local voice agent to collect a second onboarding field and decoupled onboarding configuration from core logic by introducing a dedicated config file, making it easy to add or modify fields without touching the core logic.
- Simplified the main entry point by replacing hardcoded turn logic with a dynamic loop that scales automatically based on the number of configured onboarding fields.
- Began exploring REST API integration as a potential next step following feedback from the project owner.

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## Team Member 3 Activities (Please include details and avoid general terms)

- Created a comparative research document titled “Cloud AI vs. Local AI: Which Is Best for Your Business?” outlining architectural trade-offs, deployment considerations, cost implications, and scalability factors, and added it to the GitHub repository for version tracking and team reference.
- Collaborated with Rishyu to optimize the Streamlit dashboard by refining layout structure and improving component organization to enhance usability and maintainability.
- Investigated and attempted to resolve issues related to dashboard.log generation and logging behavior within the dashboard environment to improve runtime visibility and debugging.
- Began exploring styling approaches within Streamlit, evaluating built-in theming options versus custom CSS integration to determine the most suitable approach for improving the dashboard’s visual presentation.

## Team Member 4 Activities (Please write down details and avoid general terms)

- Implemented and tested multiple onboarding form layouts within the Streamlit dashboard using both single-column and two-column grouped structures to improve clarity and scalability as new fields are added.
- Defined and structured the required candidate onboarding fields, including personal details, professional summary, skills, and career interests, to support a more complete candidate profile model.
- Extended the dashboard by adding input components for each onboarding field and organizing them in a consistent layout to prepare for future validation and backend integration.
- Designed the form workflow to support mapping voice-collected data into structured dashboard fields, enabling smoother integration between the voice agent and UI.
- Aligned updated form layouts and onboarding workflow changes with revised dashboard mockups and Project Owner feedback to maintain consistency with project expectations.

Did you have meeting with your Project Owner? If yes, write details of meeting and its outcome

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No, we did not meet with the project owner this week. Our most recent meeting was on Friday, January 30th, where session context retention and the correctional loop were confirmed out of scope, project proposal was discussed, and REST API integration was raised as a consideration for future development.

## For major GitHub commits during the week, specify the Commit Title and its reason

- **Create pyproject config file for project (2026/02/11)**
  - Introduced pyproject.toml to standardise Python and dependency versions across environments.
- **Fix Streamlit Python version issue (Fixes #3) (2026/02/11)**
  - Resolved Python version incompatibility causing Streamlit to fail across different team member machines.
- **Update [dashboard.py](#) (2026/02/12)**
  - Implemented the initial Streamlit dashboard implementation.
- **Add employment status field and system prompt guided onboarding (2026/02/12)**
  - Added employment status as a second onboarding field, extracted onboarding configuration into a dedicated file, and refactored the conversation flow to be config-driven via fields and a prompt declared in the configuration file.

## Is there any other information you want to reflect about your project (optional)

- The team has started discussing the potential integration of a REST API alongside the voice agent, based on feedback received from the project owner. This has not yet been scoped or planned but will be considered as development progresses.
- The team is currently awaiting feedback from the professor on the project proposal. While updates to the proposal are planned regardless, particularly to reflect the descoped items and update the schedule, the team would prefer to incorporate the professor's feedback before finalizing changes.
- The upcoming week is a break week, so active development will be limited, as the team will prioritize improving the existing implementation, focusing on error handling improvements, fallback opportunities, and logging enhancements.

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If you have any screenshot, artifact, etc. that can illustrate your week's progress, please include it here (Optional)

```
=====
VOICE ASSISTANT PROTOTYPE
=====

[INFO] main.py:38 - main() - Using LocalVoiceAgent
[INFO] local_voice_agent.py:39 - __init__() - Initializing local models...
[INFO] local_voice_agent.py:41 - __init__() - Loading Whisper model: base
[INFO] local_voice_agent.py:44 - __init__() - Checking Ollama connection...
[INFO] local_voice_agent.py:49 - __init__() - Using gTTS for text-to-speech
[INFO] local_voice_agent.py:50 - __init__() - All local models ready!
[INFO] main.py:47 - main() - Starting onboarding session...
[INFO] local_voice_agent.py:155 - generate_response() - Generating response with local gemma3:1b...
[INFO] local_voice_agent.py:195 - generate_response() - Assistant Response: 'Hi there! Welcome! It's so nice to meet you. I'm here to help you find your next great job. 😊'

Let's start with a little bit of information. First, could you tell me - what's your name?
[INFO] local_voice_agent.py:211 - text_to_speech() - Converting response to speech with gTTS...
[INFO] local_voice_agent.py:230 - play_audio() - Playing response...
[INFO] local_voice_agent.py:239 - play_audio() - Playback complete!
[INFO] local_voice_agent.py:250 - cleanup_file() - Removed temporary file
[INFO] main.py:54 - main() - Starting turn 1 of 2
[INFO] local_voice_agent.py:92 - record_audio() - Recording for 5 seconds... Speak now!
[INFO] local_voice_agent.py:100 - record_audio() - Recording complete!
[INFO] local_voice_agent.py:113 - save_audio() - Creating temporary file
[INFO] local_voice_agent.py:130 - transcribe_audio() - Transcribing audio with local Whisper...
/Users/brendandileo/Desktop/School/Fifth Sem/Applied-research/W26-Applied-Research-Voice-Agent/venv/lib/python3.11/site-packages/whisper/transcribe.py:132: UserWarning: FP16 is not supported on CPU; using FP32 instead
    warnings.warn("FP16 is not supported on CPU; using FP32 instead")
[INFO] local_voice_agent.py:135 - transcribe_audio() - You said: 'My name is Brendan. It's funny, I guess.'
[INFO] local_voice_agent.py:155 - generate_response() - Generating response with local gemma3:1b...
[INFO] local_voice_agent.py:195 - generate_response() - Assistant Response: 'That's a great name, Brendan! It's nice to meet you. 😊 Okay, great. Now, what's your current employment status? Are you currently employed, or are you looking for a new job?'
[INFO] local_voice_agent.py:211 - text_to_speech() - Converting response to speech with gTTS...
[INFO] local_voice_agent.py:230 - play_audio() - Playing response...
[INFO] local_voice_agent.py:239 - play_audio() - Playback complete!
[INFO] local_voice_agent.py:250 - cleanup_file() - Removed temporary file
[INFO] local_voice_agent.py:250 - cleanup_file() - Removed temporary file
[INFO] main.py:54 - main() - Starting turn 2 of 2
[INFO] local_voice_agent.py:92 - record_audio() - Recording for 5 seconds... Speak now!
[INFO] local_voice_agent.py:100 - record_audio() - Recording complete!
[INFO] local_voice_agent.py:113 - save_audio() - Creating temporary file
[INFO] local_voice_agent.py:130 - transcribe_audio() - Transcribing audio with local Whisper...
/Users/brendandileo/Desktop/School/Fifth Sem/Applied-research/W26-Applied-Research-Voice-Agent/venv/lib/python3.11/site-packages/whisper/transcribe.py:132: UserWarning: FP16 is not supported on CPU; using FP32 instead
    warnings.warn("FP16 is not supported on CPU; using FP32 instead")
[INFO] local_voice_agent.py:135 - transcribe_audio() - You said: 'I'm currently employed.'
[INFO] local_voice_agent.py:155 - generate_response() - Generating response with local gemma3:1b...
[INFO] local_voice_agent.py:195 - generate_response() - Assistant Response: 'Wonderful! That's excellent. So, you're currently employed. Perfect.'
```

Figure 1: Local Voice Agent Flow with Additional Onboarding Field

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```
warnings.warn("FP16 is not supported on CPU, using FP32 instead")
[INFO] local_voice_agent.py:135 - transcribe_audio() - You said: 'My name is Brendan. It's funny, I guess.'
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[INFO] local_voice_agent.py:239 - play_audio() - Playback complete!
[INFO] local_voice_agent.py:250 - cleanup_file() - Removed temporary file
[INFO] local_voice_agent.py:250 - cleanup_file() - Removed temporary file
[INFO] main.py:54 - main() - Starting turn 2 of 2
[INFO] local_voice_agent.py:92 - record_audio() - Recording for 5 seconds... Speak now!
[INFO] local_voice_agent.py:100 - record_audio() - Recording complete!
[INFO] local_voice_agent.py:113 - save_audio() - Creating temporary file
[INFO] local_voice_agent.py:130 - transcribe_audio() - Transcribing audio with local Whisper...
/Users/brendandileo/Desktop/School/Fifth Sem/Applied-research/W26-Applied-Research-Voice-Agent/venv/lib/python3.11/site-packages/whisper/transcribe.py:132: UserWarning: FP16 is not supported on CPU; using FP32 instead
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[INFO] local_voice_agent.py:135 - transcribe_audio() - You said: 'I'm currently employed.'
[INFO] local_voice_agent.py:155 - generate_response() - Generating response with local gemma3:1b...
[INFO] local_voice_agent.py:195 - generate_response() - Assistant Response: 'Wonderful! That's excellent. So, you're currently employed. Perfect.

Just to confirm, you're Brendan, and you're currently employed?'
[INFO] local_voice_agent.py:211 - text_to_speech() - Converting response to speech with gTTS...
[INFO] local_voice_agent.py:230 - play_audio() - Playing response...
[INFO] local_voice_agent.py:239 - play_audio() - Playback complete!
[INFO] local_voice_agent.py:250 - cleanup_file() - Removed temporary file
[INFO] local_voice_agent.py:250 - cleanup_file() - Removed temporary file
[INFO] main.py:70 - main() - Onboarding session complete.
```

Figure 2: Local Voice Agent Flow with Additional Onboarding Field (Continued)